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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
FAULK, DEVONA E	
ART UNIT	**PAPER NUMBER**
2615	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/577,399	SHI ET AL.	
	Examiner	Art Unit	
	Devona E. Faulk	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 May 2000* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. The applicant's RCE and amendment was received and entered.

2. The applicant has amended claims 1 and 5 and cancelled claims 12-22.

3. Applicant's arguments filed 7/24/2006, with regard to the amended claim have been fully considered but they are not persuasive. The applicant only asserts that none of the cited references having any corresponding device. The newly recited language recites " a device to selectively output a signal from one of said mixers". The examiner asserts that prior art Shuholm in combination with prior art Intel and in view of In Re Harza discloses programmable ports and this reads on the newly recited claim language because programmable ports provide for selectively outputting a signal. The ports collectively read on device. Furthermore, the specification, on page 9, lines 2-5, teaches of switching output or input ports of the codec and not the mixers.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 5 recite" a device to selectively output a signal from one of said mixers". The specification, on page 9, lines 2-5, teaches of switching output or input ports of the codec and not the mixers.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 1,3-6,8 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Intel Corporation's AC '97 Component Specification (hereafter Intel) in view of *In Re Harza*, 274 F. 2d 669, 124 USPQ 378 (CCPA 1960) in further view of Shuholm (U.S. Patent 6,104,997).

Claims 1 and 5 share common features.

Regarding **claims 1 and 5**, AC' 97 discloses a codec (Figure 1) comprising:

a digital interface (digital interface of figure 1) including a first pair of stereo channels (Figure 1);

a first pair of digital to analog converters coupled to the first pair of stereo channels (Figure 1; D/A converters (DACs) which support a stereo PCM out channel);

an analog mixer (analog mixing block of Figure 1) outputting an audio program, said mixer coupled to the first pair of digital to analog converters;

a pair of analog to digital converters (ADCs) coupled to the analog-mixing block (Figure 1).

Intel, on page 28, section 5.1 teaches that the digital interface handles multiple inputs and output audio streams.

Intel fails to teach specifically of two stereo channel pairs, each coupled to a D/A converter (Figure 1 (1-3); Figure 4(93d,93e)) whose output is fed to a separate mixer (92b,92c; Figure 4).

It would have been obvious under duplication of parts, *In Re Harza*, 274 F. 2d 669, 124 USPQ 378 (CCPA 1960), to incorporate the additional D/A converters and mixer for the benefit of processing the second stereo channel separately. *In Re Harza* states that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. The result of having a duplicate pair of D/A converters and another mixer to accommodate a second stereo channel pair would still yield the same result of converting a digital signal to an analog signal and providing that signal to a mixer.

Intel teaches of a digital interface having ports.

Intel as modified by Harza fails to disclose a device to selectively output a signal from one of said mixers.

Shuholm teaches of programmably changing the assignment of said programs to said ports (abstract, Figure 4). The ports collectively read on the device to selectively output a signal from one of said mixers. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Intel as modified by Harza to include a plurality of programmably changing port assignments as taught by Shuholm in order that assignments could be changed

using a separate means of control and without having to use more physical space for the system (column 1, lines 43-46.

Furthermore, regarding **claim 5**, Intel teaches of a codec coupled to a processor (Audio Codec '97, PCI accelerator, Figure 2). All other elements of claim 5 are comprehended by Intel, *In Re Harza* and Shuholm as applied above.

Regarding **claim 4,** Intel as modified by *In Re Harza* and Shuholm discloses wherein said digital interface has a programmably changeable output data rate. Intel further discloses on page 14 and pages 61-62 that the AC 097 analog component can perform fixed or variable sample rated DAC and ADC conversions. Thus data output from the digital interface can have a programmed changeable output data rate.

All elements of **claim 6** are comprehended by the rejection of claim 5.

Regarding **claim 8**, Intel as modified *In Re Harza* and Shuholm wherein said system can process two separate audio programs at the same time. Intel, on page 28, section 5.1 teaches that the digital interface handles multiple inputs and output audio streams. Kamiya teaches of processing two audio programs at the same time.

Regarding **claims 3 and 10**, Intel teaches of ports (ports of the digital interface). Intel as modified by *In Re Harza* and Shuholm fail to disclose a plurality of programmable ports so that the connections may be changed. Shuholm teaches of programmably changing the assignment of said programs to said ports (abstract, Figure 4). The ports read on the device to selectively output

a signal from one of said mixers. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Intel as modified by Harza to include a plurality of programmably changing port assignments as taught by Shuholm in order that assignments could be changed using a separate means of control and without having to use more physical space for the system (column 1, lines 43-46).

Regarding **claim 11**, Intel as modified by *In Re Harza* and Shuholm discloses wherein said digital interface has a programmably changeable output data rate. Intel discloses on page 14, paragraph 1 that the AC 097 analog component can perform fixed or variable sample rated DAC and ADC conversions. Thus data output from the digital interface can have a programmed changeable output data rate. It would have been obvious to one of ordinary skill in the art to modify Intel's codec so that the digital interface can have a changeable output data rate for the benefit of mixing data.

7. **Claims 2 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Intel Corporation (Audio Codec '97) in view of *In Re Harza*, 274 F. 2d 669, 124 USPQ 378 (CCPA 1960) as applied above to claims 1 and 5 and Shuholm (U.S. Patent 6,104,997) as applied above to claims 1 and 5 in further view of Malcolm, Jr. et al. (U.S. Patent 6,301,366).

Regarding **claims 2 and 9,** Intel as modified by *In Re Harza* and Shuholm fails to disclose of further including a Sony/Phillips digital interconnect formatter (SPDIF). Malcolm discloses a single chip audio system including a SPDIF

(column 12, lines 40-45). A SPDIF allows the transfer of audio from one file to another without the conversion to and from an analog format, which could degrade signal quality. It would have been obvious to modify Intel as modified by Harza by further including a SPDIF as taught by Malcolm in order to allow for the transfer of audio without degrading the signal quality.

9. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Intel Corporation (Audio Codec '97) as applied to claim 5 above and *In Re Harza* as applied to claim 5 above, 274 F. 2d 669, 124 USPQ 378 (CCPA 1960) and Shuholm (U.S. Patent 6,104,997) as applied to claim 5 above, in further view of Mayo (U.S. patent 5,133,081).

Regarding **claim 7,** Intel as modified by *In Re Harza* and Shuholm fails to disclose wherein said system may simultaneously play one audio program while recording another audio program. Intel as modified by Harza meets all elements of that claim. Intel teaches of a machine-readable media (40) capable of storing recorded karaoke data. Mayo discloses a system comprising two codecs capable of simultaneously recording and playing messages using the same recording medium (column 10, lines 42-46). It would have been obvious to one of ordinary skill in the art at the time of the invention to use Mayo's concept of simultaneously recording and playing in order to allow simultaneous recording and playback.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848.

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2615.The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DEF

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